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CORPORATE GOVERNANCE, MARKET VALUATION AND DIVIDEND POLICY IN BRAZIL

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This study investigates the effects of the corporate governance structure on market valuation and dividend payout of Brazilian companies. The empirical results indicate a high degree of ownership and control concentration. We can also note a significant difference between the voting and total capital owned by the largest shareholders, mainly through the existence of non-voting shares, pyramidal structures, and shareholding agreements. These mechanisms seem to be used by controlling shareholders to keep the firm's control without having to own 50% of the total capital. The evidence also reveals that there is a relationship between governance structure, market valuation, and dividend policy in Brazil.

Keywords: Ownership structure; corporate control; agency costs; Brazil

I INTRODUCTION

The concept of corporate governance is not a particularly recent subject, but it was only in the 80´s that corporate governance models were studied to evaluate their effects in the valuation and dividend policy of companies in emerging markets. In Brazil, the debate about corporate governance structures was intensified in the last decade, when factors such as privatizations, the opening process of the Brazilian economy, the entrance of new investors – especially foreign and institutional ones, have stimulated new efforts towards better corporate governance practices.

The corporate governance concept itself is very broad, but the analysis can be centered in the ownership (cash flow rights) and control (voting rights) structure of companies, since this dimension is intimately related with all the others. Shleifer and Vishny (1997) found that the ownership structure, along with the country legal protection, is one of the most important determinants of corporate governance. The main purpose of this paper is to analyze the ownership and control structure of Brazilian companies and its effect on market valuation and dividend policy.

The understanding of ownership structure is very important since it influences directly the efficiency of the market for corporate control. First it shows the degree of risk diversification of shareholders. When ownership is concentrated, there is less risk diversification by shareholders. A second important point is that it shows a potential agency problem in the management of the firm. There may be an agency problem between managers and shareholders because managers may not be maximizing shareholder's value. When there is a stockholder that can influence the control of a company, a new agency problem can arise between controlling and minority shareholders. We will examine these points by looking into direct and indirect ownership concentration of Brazilian companies.

Most of the literature that first studied the problem of the separation between ownership and control has done it in an environment where ownership was diffuse, i.e., there were a lot of small shareholders, each of whom with a very little portion of the capital. Berle and Means (1932) studied the ownership structure of large firms in the United States and observed that most of them had its capital diluted among many small shareholders. This idea was extensively accepted as the corporation model in modern economies. However, recent studies concluded that very few countries are actually characterized by diffuse ownership firms. Many developed countries, such as France, Italy, and Germany, and emerging markets are characterized by a high concentration of ownership and control.

This paper follows an extensive literature on the effects of corporate ownership structures on valuation. Jensen and Meckling (1976) and Morck *et al* (1988) have provided important contributions to the research on ownership structures and corporate valuation. Jensen and Meckling concluded that concentrated ownership is beneficial for corporate valuation, because large investors are better at monitoring managers. Morck *et al* distinguish between the negative control effects and the positive incentive effects of higher shares of ownership. They suggest that the absence of separation between ownership and control reduces conflicts of interest and thus increases shareholder value.

Recent research suggests that higher cash flow rights are associated with higher valuation. In contrast, the concentration of control rights and the separation of voting from cash flow rights have a negative effect on firm value. Shleifer and Vishny (1997), La Porta *et al* (1998,1999), Morck *et al* (1988) and Claesens *et al* (2000a, 2000b) studied the conflicts of interest between large and small shareholders. When large investors control a corporation,

their policies may result in the expropriation of minority shareholders. Such companies are unnattractive to small shareholders and their shares have lower valuation.

The Brazilian literature on corporate governance is composed mainly by research made since the 90´s. Valadares and Leal (2000) and Leal, Carvalhal-da-Silva and Valadares (2002) analyze the direct and indirect ownership structures and find a high degree of ownership concentration in Brazilian firms. The concentration occurs mainly through the violation of the one share–one vote rule.

In this paper, we test 6 hypotheses in order to analyze the effects of cash flow and voting rights on market valuation and dividend policy of Brazilian companies. Recent research (Shleifer and Vishny (1997), La Porta *et al* (1998, 1999, 2000a, 2002), Morck *et al* (1988) and Claessens *et al* (2000a, 2000b)) suggests that the concentration of voting rights by the controlling shareholders is associated with more expropriation of minority shareholders since large owners may prefer to generate private benefits of control that are not shared by minority shareholders. So the first hypothesis to be tested is:

H1: Higher concentration of voting rights by the controlling shareholder is associated with lower corporate valuation.

Burkart, Gromb and Panunzi (1998) argue that, in general, expropriation is costly and therefore higher cash flow ownership should lead to lower expropriation, other things equal. La Porta *et al* (1999) argue that the power of the controlling shareholders to expropriate outside investors is moderated by their financial incentives not to do so. An important source of such inventives is equity or cash flow ownership by the controlling shareholder. The second and third hypotheses are derived from the above statements with respect to market valuation and the potential expropriation of minority shareholders.

H2: Higher cash flow ownership by the controlling shareholder is associated with higher corporate valuation.

H3: Higher separation of voting from cash flow rights by the controlling shareholder is associated with lower corporate valuation.

Recent literature suggests that corporate governance structures are related not only to market valuation, but also to dividend policy. La Porta *et al* (2000b) state that firms located in countries with a higher legal protection to minority shareholders (based on *common law* systems) pay higher dividends, compared to countries where legal protection is weak (*civil law* systems). Johnson and Shleifer (2001) consider the payment of a higher dividend as a means to establish a reputation to adequately treat minority shareholders.

Since control concentration tends to decrease firm valuation, due to the possibility of expropriation of minority shareholders, we can expect that firms with high concentration of control have a low payout, since the controlling shareholder will tend to distribute a low dividend, expropriating minority shareholders. Therefore, the fourth hypothesis is:

H4: Higher concentration of voting rights is associated with lower dividend payout

On the other hand, an increase in the concentration of cash flow rights is associated with a higher firm valuation, due to the alignment of interests between the controlling and minority shareholders. Therefore, we can expect that firms with a high concentration of cash flow rights distribute high dividends, which formulates our fifth and sixth hypotheses.

H5: Higher concentration of cash flow rights is associated with higher dividend payout.

H6: Higher separation of voting from cash flow rights is associated with lower dividend payout.

The paper is structured as follows. This section presented the theoretical framework, with some of the main studies on the topic, along with the hypotheses to be tested. Next section describes the data set and the methodology used in the tests. Section III presents the results of the ownership and control structures and their relationship with market valuation and dividend payout of Brazilian firms. Section IV concludes.

II DATA AND METHODOLOGY

Our sample consists of firms listed in Sao Paulo Stock Exchange (Bovespa) in the year of 2000. We collected information on the shareholding structure from the Infoinvest Database (Browne Global Solutions). Our sample does not include financial institutions, companies with

incomplete or unavailable information, and firms whose shares were not traded in Bovespa during December 2000. The final sample consists of 225 firms, which represent about 45% of the number of firms, and approximately 70% of total market capitalization of Bovespa.

The study of the ownership structure should not be limited to the direct ownership, but should also focus on who is the final owner of the firms. Therefore, we analyze two forms of shareholding composition: direct and indirect. Direct shareholders are those who own shares in the company itself. We consider all shareholders with 5% or more of the voting capital, because 5% is the threshold for mandatory identification of shareholders in Brazil. Indirect composition represents stockholders who ultimately own the company. For example, if a shareholder owns, directly, 60% of firm A, which owns 51% of firm B, we can say that this shareholder owns, indirectly, 30.60% (60% times 51%, i.e, multiplying the levels of shareholding interest) and controls 51% (the minimum between 51% and 60%, i.e, the weakest link in the shareholding channel) of firm B.

This analysis was possible since the Annual Reports show the shareholding composition of parent companies when they exist. Thus, we analyzed the shareholding composition backwards until we were able to classify the true owners into one of the following groups: (i) individuals or families; (ii) foreign investors (individuals or institutions); (iii) government; (iv) institutional investors (banks, insurance firms, pension funds or investment funds).

We analyzed the direct and indirect structure of both control (voting capital) and ownership (total capital, i.e, the sum of voting and non-voting capital) of Brazilian firms. Cash flow and voting rights can be rather different due to the use of non-voting shares and indirect structures ("pyramids"). A pyramid is a structure where a shareholder controls a firm, which controls other firms and so on. Shareholding agreements are another way to increase control, because shareholders can form groups through written contracts in order to exercise jointly their voting rights.

The 225 companies on the sample were divided into two main groups: firms with and without a majority shareholder. A company with a majority shareholder is one where a single shareholder has directly more than 50% of the voting capital. For the direct and indirect shareholding composition we computed the voting and total capital owned by the largest, the three largest and the five largest shareholders of the firm.

Since corporate governance is related to the control of firms, it is fundamental to identify the control and the ownership structure. The control and ownership categories differ with respect to the concentration of ownership and the origin of capital. Therefore, the ownership has two main dimensions: (i) the identity of the largest owner; and (b) the concentration of his ownership. In this context, another classification was made, based on the type of the owners, and the firms with a majority shareholder were further divided according to the origin of capital: foreigners, government, familiy and institutional investors.

The purpose of the classification of firms according to the type of the majority shareholder and to his concentration of ownership is to verify the existence of a significative difference among firms, regarding their market valuation and dividend policy. In order to measure the market value, we used Tobin's Q, which represents the market value of assets, divided by their replacement cost. Many authors (Morck *et al* (1988), McConnel and Servaes (1990), La Porta *et al* (2000a, 2002)) have used Tobin's Q to measure the relative market value. The numerator of Tobin's Q is the market value of the firm´s assets, computed as the book value of assets minus the book value of common equity and deferred taxes plus the market value of common equity. The denominator is the replacement value of assets, and we used the book value of assets as a proxy for this variable. The dividend payout is measured as the dividend/net profit ratio.

The first analysis is a parametric test that compares averages, in order to evaluate possible differences between market valuation and dividend payout of the firms, classified according to the origin of capital and to the ownership and control concentration. Then, we conduct a more formal analysis using multiple linear regression procedures. Using this technique, we are able to study how independent variables, specially the direct and indirect control and ownership structure, affects the market valuation and dividend payout of Brazilian firms. Therefore, we assume a causality relation among variables, such that the dependent variable is explained by the independent variables.

We estimated this model for each of the two dependent variables (Tobin's Q and dividend payout). The independent variables include measures of control and ownership structure (voting capital, total capital, voting/total capital ratio), and variables that might influence the dependent variables, previously identified and selected from the literature, such as leverage (debt/asset ratio), size (ln (assets)), ROA (EBITDA/Asset ratio), risk (stock volatility), current asset/total asset ratio. Specifications that included the squared variables (voting

capital)^2, (total capital)^2, (voting/total capital ratio)^2, and dummy variables that indicated the type of the shareholder were also tested. The inclusion of squared variables is consistent with a curvilinear relationship between firm valuation and ownership structure (Morck, Shleifer and Vishny (1988), and McConnel and Servaes (1990)). Equations 1 and 2 show the variables included in each model.

(1) $Tobin's\ Q = Constant + \theta_1\ Voting\ Capital + \theta_2\ Total\ Capital + \theta_3\ Voting/Total\ Capital\ Ratio + \theta_4\ (Voting\ Capital)^2 + \theta_5\ (Total\ Capital)^2 + \theta_6\ (Voting/Total\ Capital)^2 + \theta_7\ Dummy\ Shareholder\ Type + \theta_8\ Leverage + \theta_9\ Size + \theta_{10}\ ROA$

(2) $Payout = Constant + \theta_1\ Voting\ Capital + \theta_2\ Total\ Capital + \theta_3\ Voting/Total\ Capital\ Ratio + \theta_4\ (Voting\ Capital)^2 + \theta_5\ (Total\ Capital)^2 + \theta_6\ (Voting/Total\ Capital)^2 + \theta_7\ Dummy\ Shareholder\ Type + \theta_8\ Leverage + \theta_9\ Size + \theta_{10}\ ROA + \theta_{11} Risk + \theta_{12}\ Current/total\ asset\ ratio$

In all specifications, we also included industry dummy variables, to control inherent characteristics of specific sectors of the economy. The idea behind this adjustment is that each industry may be in a different stage of maturity, growth and present some peculiarities that determine the firm valuation and dividend policy.

III EMPIRICAL RESULTS

Table I shows the direct structure of ownership and control of Brazilian companies in 2000. Out of 225 firms, 203 (90%) have one shareholder that owns more than 50% of the voting capital. This shareholder owns on average 76% of the voting capital. Among the firms where the control is not held by one shareholder (22), the largest shareholder owns on average 37% of the voting capital. This demonstrates that, even when one single shareholder does not have the majority of votes, the largest shareholder holds a considerable portion of them. Considering the sample as a whole, the largest, the 3 largest and the 5 largest shareholders have, respectively, 72%, 85% and 87% of the voting capital.

Our results show a high degree of concentration of the voting capital. Even when there is no majority shareholder, the largest one owns a significant portion of the voting capital, and the company is, on average, controlled by its 3 largest shareholders. Besides this, 87% of the voting capital of companies are in the hands of the 5 largest shareholders.

Table I - Direct Shareholding Composition of Brazilian Companies in 2000

Direct shareholding composition of 225 Brazilian companies. A company with a majority shareholder is one where a single shareholder has more than 50% of the voting capital. Data collected from Annual Reports, referring to year-end 2000.

	Companies with a majority shareholder (203)		Companies without a majority shareholder (22)		Total Sample (225)	
Shareholder	Voting Capital	Total Capital	Voting Capital	Total Capital	Voting Capital	Total Capital
Largest	76%	54%	37%	23%	72%	51%
3 Largest	88%	65%	62%	41%	85%	62%
5 Largest	89%	65%	66%	44%	87%	63%

We also can note a reasonable difference between the percentage of voting and total capital held by large shareholders. In Brazil, the issuance of non-voting shares appears to be used by large shareholders to maintain control of the firm without having to hold 50% of the total capital. In companies with a single shareholder, this investor has on average 76% of the votes but only 54% of the total capital. Considering the entire sample, the five largest shareholders have 87% of the voting capital but only 63% of the total capital.

In Brazil companies are allowed to issue shares without voting rights in an amount up to two-thirds of the total capital (Law 6404 - Law of Corporations). In 2001, the New Law of Corporations (Law 10303) changed the maximum amount of non-voting shares from 2/3 to 50% of total capital, but this rule is obligatory only to non-public firms that decide to go public after October 2001 and for new companies. This mechanism allows companies to issue shares without relinquishing control and is therefore a way of separating ownership from control. Control of a company can be guaranteed with only one-sixth of its total capital. Thus, this group may represent companies where a pyramidal structure is used to separate ownership and control, or to maintain distance from the one share-one vote rule.

Table II shows the indirect structure of control and ownership of Brazilian companies in 2000. In the case of companies where the major shareholder holds more than 50% of the voting capital the indirect ownership is more dilluted. In direct form, the average majority shareholder owns 76% of the voting capital and 54% of the total capital, while indirectly the figures are 69% and 40% respectively. Nevertheless, this reduced participation of the major shareholder does not occur in the case of companies where there is no single majority shareholder. On the contrary, the data actually show a small increase in the invested capital. Directly, the largest shareholder has on average 37% of the voting capital and 23% of the total capital, while indirectly the figures are, respectively, 40% and 24%. This fact may indicate the use of pyramidal structures to maintain control with reduced investment in the firm.

Table II - Indirect Shareholding Composition of Brazilian Companies in 2000

Indirect shareholding composition of 225 Brazilian companies. The indirect composition shows the indirect interest of shareholders. Such participation is analyzed backwards until the effective shareholder is revealed to be from one of the following groups: (i) individuals or families; (ii) foreign investors (individuals or institutions); (iii) government; (iv) institutional investors (banks, insurance firms, pension funds or investment funds). A company with a majority shareholder is one where a single shareholder has more than 50% of the voting capital directly. Data collected from Annual Reports, referring to year-end 2000.

	Companies with a majority shareholder (203)		Companies without a majority shareholder (22)		Total Sample (225)	
Shareholder	Voting Capital	Total Capital	Voting Capital	Total Capital	Voting Capital	Total Capital
Largest	69%	40%	40%	24%	66%	38%
3 Largest	83%	51%	61%	39%	81%	50%
5 Largest	85%	54%	64%	41%	83%	52%

Then, the 203 firms that had a controlling shareholder were classified according to the origin of capital. Table III shows the direct and indirect structure of control and ownership of firms according to the identity of the largest shareholder (foreigners, government, family and institutional investors). Among these 203 firms, 108 are controlled by families, 60 by foreign investors, 19 by institutional investors and 16 by the government. On average, institutional

investors own directly 80% of the voting capital, while foreign investors, government and families own respectively 79%, 75% and 73%. Indirectly, the voting capital of institutional investors drops to 64%, while foreign investors, government and families own, respectively, 74%, 77% and 66% of the voting capital.

Table III - Shareholder Composition of Controlling Groups in 2000

Firms that have a controlling shareholder were classified according to the origin of capital (foreigners, government, family and institutional investors) and the shareholder composition of each of those groups was analyzed.

		Nº Firms	% Firms	Direct Structure		Indirect Structure	
				Voting Capital	Total Capital	Voting Capital	Total Capital
Total Sample		225	100%	72%	51%	66%	38%
Firms with a controlling shareholder	Family	108	48%	73%	46%	66%	31%
	Government	16	7%	75%	57%	77%	51%
	Foreigners	60	27%	79%	62%	74%	56%
	Institutional	19	8%	80%	66%	64%	33%
	Total	203	90%	76%	54%	69%	40%
Firms without a controlling shareholder		22	10%	37%	23%	40%	24%

Table IV shows the existence of shareholding agreements, pyramidal structures and the percentage of voting capital on total capital of Brazilian firms. These 3 mechanisms are closely related to the control and ownership structure and to the possibility of expropriation of minority shareholders, since they can increase the separation between voting and cash flow rights. Shareholding agreements exist in 27% of the family-owned firms, as opposed to only 6% of government-owned firms that have those agreements. Generally, 23% of Brazilian firms have shareholding agreements, influencing the corporate governance, in the sense that shareholding agreements on voting rights are a way of increasing firm control.

Most of the firms (86%) have pyramidal structures, mainly family-owned companies (91%) and lessly government-owned firms (63%). The issue of non-voting shares is a common

practice in Brazil, and voting shares represent on average 53% of the total capital. The percentage of non-voting shares on the total capital is smaller in firms controlled by families (49%) and institutional investors (51%). On the other hand, government-owned firms have the highest percentage of voting shares on total capital (64%).

Table IV - Mechanisms of Separation Between Control and Ownership in Brazil

Firms with a controlling shareholder were classified according to the origin of capital (foreigners, government, family and institutional investors), and mechanisms of separation between control and ownership were analyzed: shareholding agreements, pyramids and the percentage of voting shares on total capital.

		% Firms with Shareholding Agreements	% Firms with Pyramid Structure	% Voting Capital/Total Capital
Total Sample		23%	86%	53%
Firms with a controlling shareholder	Family	27%	91%	49%
	Government	6%	63%	64%
	Foreigners	20%	87%	56%
	Institutional	21%	79%	51%
	Total	23%	86%	53%
Firms without a controlling shareholder		27%	82%	59%

Table V shows the market valuation (Tobin's Q), and the payout of Brazilian firms, according to the identity of the controlling shareholder (foreigners, government, family and institutional investors). Firms without a controlling shareholder have a higher Tobin's Q (1.19) than those with a controlling shareholder (1.07). Since this analysis is focused on voting rights (control), this fact seems to confirm hypothesis 1, i.e., that a higher concentration of voting rights is associated with a lower firm valuation. Therefore, although the differences are not statistically significant, there is some evidence of the negative relationship between control concentration and market valuation. Moreover, there is statistical evidence that firms controled by the government tend to be undervalued (Q = 0.76) when compared to firms controlled by families (Q = 1.09), foreigners (Q = 1.10) and institutional investors (Q = 1.16).

There is no statistically significant difference between average payout of firms without (35%) or with (31%) a controlling shareholder. Although there is no statistical significance, companies controlled by the government tend to have a higher payout (36%) than the ones controlled by families (28%), institutional investors (34%) and foreigners (35%).

Table V - Market Valuation and Dividend Payout of Brazilian Firms in 2000

Comparative analysis of market valuation and dividend payout of Brazilian companies according to the type of controlling shareholders (foreigner, government, family and institutional investors)

		Tobin's Q	Payout
Total Sample		1.08	32%
Firms with a controlling shareholder	Family	1.09	28%
	Government	0.76*	36%
	Foreigners	1.10	35%
	Institutional	1.16	34%
	Total	1.07	31%
Firms without a controlling shareholder		1.19	35%

* indicates Tobin´s Q differences significant at the 1% level.

Then, we performed a more formal analysis using multiple linear regressions. Table VI shows the results of the 6 model specifications for the study of the market valuation of Brazilian companies, considering the direct structure of ownership and control. Although only some variables of the ownership and control structure were statistically significant, the coefficient signs confirm what is predicted from the theory. The negative coefficient of the voting capital confirms hypothesis 1, i.e., that a higher concentration of voting rights is associated with a lower firm valuation. The positive coefficient of the total capital confirms hypothesis 2, i.e., the higher the concentration of cash flow rights, the higher is the firm valuation. And the negative coefficient of the voting/total capital ratio confirms hypothesis 3, i.e., that the higher the voting/total capital ratio, the lower is the firm valuation.

Table VI - The Effects of the Direct Structure of Ownership and Control on Market Valuation of Brazilian Firms

Multiple linear regression analysis to evaluate the effects of the direct structure of ownership and control on the market valuation of 225 Brazilian companies in 2000. The dependent variable is the Tobin's Q and the independent variables are: voting capital; total capital; voting/total capital ratio; leverage; firm size (log assets); ROA; (voting capital)^2; (total capital)^2; (voting/total capital)^2; and *dummy* indicating the type of controlling shareholders. Six model specifications were tested: 2 for the largest, 2 for the three largest, and 2 for the five largest shareholders. In all specifications, we included industry dummies (coefficients are not reported here). The p-values of the t-tests are shown in parenthesis.

	Largest Shareholder		3 Largest Shareholders		5 Largest Shareholders	
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.22 (0.50)	-0.11 (0.74)	0.30 (0.42)	-0.30 (0.51)	0.27 (0.48)	-0.25 (0.65)
Leverage	1.06* (0.00)	1.06* (0.00)	1.06* (0.00)	1.06* (0.00)	1.06* (0.00)	1.06* (0.00)
Size	0.01 (0.47)	0.01 (0.50)	0.01 (0.51)	0.00 (0.81)	0.01 (0.47)	0.01 (0.65)
ROA	1.10* (0.00)	0.82** (0.02)	1.11* (0.00)	0.85* (0.01)	1.09* (0.00)	0.89* (0.01)
Voting Capital	-0.21 (0.47)	-0.55 (0.41)	-0.35 (0.25)	-1.31 (0.29)	-0.19 (0.54)	-0.86 (0.51)
Total Capital	0.10 (0.79)	0.50 (0.46)	0.14 (0.71)	0.40 (0.71)	0.03 (0.95)	0.58 (0.68)
Voting/Total Capital Ratio	-0.02 (0.83)	-0.01 (0.44)	-0.00 (0.99)	-0.04 (0.62)	-0.03 (0.81)	-0.05 (0.72)
(Voting Capital)^2		-0.69 (0.16)		-1.17 (0.14)		-0.86 (0.28)
(Total Capital)^2		0.33 (0.55)		0.23 (0.77)		0.41 (0.65)

(Voting/Total Capital Ratio)^2		-0.00 (0.43)		-0.00 (0.72)		-0.00 (0.70)
Dummy Foreigners		0.12*** (0.10)		0.14*** (0.07)		0.14*** (0.06)
Dummy Government		-0.05 (0.65)		-0.02 (0.85)		-0.03 (0.78)
Dummy Institutional		0.12 (0.23)		0.13 (0.19)		0.15 (0.12)
Adjusted R^2	0.80	0.80	0.80	0.80	0.80	0.80

*, ** and *** indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Although with little statistical significance, the firm market valuation is different, as a function of the origin of capital. Companies with a foreign or institutional controlling shareholder tend to present a higher valuation, when compared to family-owned companies, while government-owned firms tend to have the lowest valuation. A possible explanation is that in government-owned firms, governance is more complex due to the presence of one extra agent: politicians. In this context, the control rights (in the government's hands) are totally dissociated from the cash flow rights, since ownership is spread among the citizens, who are the ultimate owners of these firms. Squared variables (voting capital, total capital, and voting/total capital ratio) generally do not present statistically significant coefficients. Leverage, ROA and size have a positive relationship with the firm valuation, as predicted by the theory.

Table VII shows the results of the 6 model specifications for the study of the market valuation of Brazilian companies, considering the indirect structure of ownership and control. The results are mainly the same as the direct structure, but in the indirect structure the p-values of variables related to corporate governance tend to be lower than in the direct structure, which means that those variables have a higher statistical power in the indirect structure. For example, when we analyze only the largest shareholder, the negative relationship between voting capital concentration and market valuation becomes statistically significant at the 10% level.

Table VII - The Effects of the Indirect Structure of Ownership and Control on Market Valuation of Brazilian Firms

Multiple linear regression analysis to evaluate the effect of the indirect structure of ownership and control on the market valuation of 225 Brazilian companies in 2000. The dependent variable is the Tobin's Q and the independent variables are: voting capital; total capital; voting/total capital ratio; leverage; firm size (log assets); ROA; (voting capital)^2; (total capital)^2; (voting/total capital)^2; and *dummy* indicating the type of controlling shareholders. Six model specifications were tested: 2 for the largest, 2 for the three largest, and 2 for the five largest shareholders. In all specifications, we included industry dummies (coefficients are not reported here). The p-values of the t-tests are shown in parenthesis.

	Largest Shareholder		3 Largest Shareholders		5 Largest Shareholders	
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.21 (0.38)	-0.15 (0.89)	0.27 (0.32)	-0.86 (0.58)	0.30 (0.28)	-1.16 (0.47)
Leverage	1.06* (0.00)	1.06* (0.00)	1.06* (0.00)	1.06* (0.00)	1.06* (0.00)	1.06* (0.00)
Size	0.01 (0.48)	0.01 (0.58)	0.01 (0.61)	0.01 (0.58)	0.01 (0.48)	0.01 (0.56)
ROA	1.03* (0.00)	0.85* (0.01)	1.08* (0.00)	0.87* (0.01)	1.11* (0.00)	0.84* (0.01)
Voting Capital	-0.25*** (0.10)	-2.82 (0.13)	-0.30 (0.11)	-4.22 (0.12)	-0.26 (0.20)	-2.51 (0.36)
Total Capital	0.11 (0.44)	1.61 (0.54)	0.15 (0.35)	2.10 (0.58)	0.03 (0.87)	0.59 (0.88)
Voting/Total Capital Ratio	-0.00 (0.89)	-0.09 (0.91)	-0.01 (0.49)	-0.33 (0.78)	-0.01 (0.72)	-0.72 (0.54)
(Voting Capital)^2		-1.91** (0.03)		-2.83** (0.02)		-1.88 (0.12)
(Total Capital)^2		1.00 (0.46)		1.46 (0.42)		0.65** (0.72)

(Voting/Total Capital Ratio)^2		-0.02 (0.87)		-0.13 (0.48)		-0.19 (0.31)
Dummy Foreigners		0.12*** (0.08)		0.11 (0.13)		0.11 (0.13)
Dummy Government		-0.07 (0.52)		-0.06 (0.60)		-0.07 (0.56)
Dummy Institutional		0.16 (0.11)		0.14 (0.15)		0.15 (0.13)
Adjusted R^2	0.80	0.81	0.80	0.81	0.80	0.80

*, ** and *** indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table VIII shows the results of the 6 model specifications for the study of the payout of Brazilian firms, considering the direct structure of ownership and control. Some variables present statistically significant coefficients, with signs that confim what is predicted by the theory. The negative coefficient of the voting capital, statistically significant at the 1% level, depending on the specification, confirms hypothesis 4, i.e., firms with a high concentration of voting rights have a low payout. The positive coefficient of total capital, which is statistically significant at the 5% or 10% level, depending on the specification, confirms hypothesis 5, i.e., companies with a high concentration of cash flow rights have a high payout. Finally, the negative coefficient of the voting/total capital ratio confirms hypothesis 6, i.e., firms with a high separation between voting and cash flow rights have a low payout. The quadratic variables (voting capital, total capital, and voting/total capital ratio) did not present statistically significant coefficients.

There is no statistically significant difference between the payout of firms, as a function of the type of controlling shareholders. Family-owned fims tend to present a lower payout when compared to the rest, and government-owned firms tend to present the highest payout. According to what is predicted by the theory, the current asset/total asset ratio has a positive coefficient, although it is not statistically significant. The size and the ROA present positive coefficients, statistically significant at the 1%, 5% or 10% levels, depending on the specification. The risk and leverage have negative coefficients, and the first is statistically significant at the 1% level.

Table IX shows the results of the 6 model specifications for the study of the payout of Brazilian firms, considering the indirect structure of ownership and control. The results are

mainly the same as the direct structure, but in the indirect structure the p-values of variables related to corporate governance tend to be lower than in the direct structure, which means that those variables have a higher statistical power in the indirect structure. In this way, the relationship between payout, voting capital, total capital, and the separation between voting and total capital becomes statistically significant at the 1%, 5% or 10% levels, depending on the specification.

Table VIII - The Effects of the Direct Structure of Ownership and Control on Dividend Payout of Brazilian Firms

Multiple linear regression analysis to evaluate the effect of the direct structure of ownership and control on the payout of 225 Brazilian companies in 2000. The dependent variable is the payout and the independent variables are: voting capital; total capital; voting/total capital ratio; leverage; current asset/total asset ratio, firm size (log assets); ROA; risk (stock volatility); (voting capital)^2; (total capital)^2; (voting/total capital)^2; and *dummy* variables indicating the type of controlling shareholders. Six model specifications were tested: 2 for the largest, 2 for the three largest, and 2 for the five largest shareholders. In all specifications, we included industry dummies (coefficients are not reported here). The p-values of the t-tests are shown in parenthesis.

	Largest Shareholder		3 Largest Shareholders		5 Largest Shareholders	
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.02 (0.90)	-0.04 (0.86)	0.17 (0.39)	-0.35 (0.30)	0.17 (0.40)	-0.31 (0.44)
Leverage	-0.03 (0.21)	-0.04 (0.19)	-0.03 (0.21)	-0.03 (0.22)	-0.03 (0.20)	-0.03 (0.20)
Current Asset/Total Asset Ratio	0.11 (0.54)	0.13 (0.46)	0.12 (0.48)	0.14 (0.44)	0.11 (0.52)	0.13 (0.46)
Size	0.03* (0.00)	0.04* (0.01)	0.03* (0.01)	0.03** (0.02)	0.03* (0.01)	0.03* (0.01)
ROA	0.35 (0.13)	0.36 (0.14)	0.39*** (0.09)	0.39 (0.11)	0.42** (0.07)	0.43*** (0.08)
Risk	-0.11* (0.00)	-0.11* (0.00)	-0.11* (0.00)	-0.11* (0.00)	-0.11* (0.00)	-0.11* (0.00)
Voting Capital	-0.26* (0.01)	-0.21 (0.67)	-0.42* (0.00)	-0.57 (0.51)	-0.46* (0.00)	-0.46 (0.62)
Total Capital	0.18***	0.27	0.22**	0.55	0.26**	0.49

	(0.10)	(0.57)	(0.05)	(0.48)	(0.05)	(0.63)
Voting/Total Capital Ratio	-0.00 (0.62)	-0.00 (0.94)	-0.01 (0.46)	-0.07 (0.15)	-0.02 (0.43)	-0.07 (0.47)
(Voting Capital)^2		-0.35 (0.33)		-0.78 (0.16)		-0.69 (0.22)
(Total Capital)^2		0.46 (0.25)		0.07 (0.90)		0.05 (0.93)
(Voting/Total Capital Ratio)^2		-0.00 (0.97)		-0.00 (0.13)		-0.00 (0.49)
Dummy Foreigners		0.02 (0.78)		0.02 (0.73)		0.02 (0.70)
Dummy Government		0.03 (0.72)		0.02 (0.82)		0.02 (0.77)
Dummy Institutional		0.01 (0.88)		0.02 (0.75)		0.00 (1.00)
Adjusted R^2	0.19	0.17	0.20	0.20	0.20	0.19

*, ** and *** indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table IX - The Effects of the Indirect Structure of Ownership and Control on Dividend Payout of Brazilian Firms

Multiple linear regression analysis to evaluate the effect of the indirect structure of ownership and control on the payout of 225 Brazilian companies in 2000. The dependent variable is the payout and the independent variables are: voting capital; total capital; voting/total capital ratio; leverage; current asset/total asset ratio, firm size (log assets); ROA; risk (stock volatility); (voting capital)^2; (total capital)^2; (voting/total capital)^2; and *dummy* variables indicating the type of controlling shareholders. Six model specifications were tested: 2 for the largest, 2 for the three largest, and 2 for the five largest shareholders. In all specifications, we included industry dummies (coefficients are not reported here). The p-values of the t-tests are shown in parenthesis.

	Largest Shareholder		3 Largest Shareholders		5 Largest Shareholders	
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.29 (0.21)	-0.11 (0.89)	0.10 (0.71)	-0.70 (0.54)	0.20 (0.45)	-0.50 (0.66)
Leverage	-0.04 (0.18)	-0.04 (0.19)	-0.04 (0.14)	-0.04 (0.15)	-0.04 (0.14)	-0.04 (0.15)
Current Asset/Total Asset Ratio	0.06 (0.71)	0.09 (0.63)	0.09 (0.60)	0.11 (0.53)	0.09 (0.59)	0.12 (0.51)
Size	0.04* (0.00)	0.04* (0.00)	0.03* (0.01)	0.03* (0.01)	0.03* (0.01)	0.03* (0.01)
ROA	0.44*** (0.06)	0.44*** (0.08)	0.44*** (0.06)	0.44*** (0.07)	0.45** (0.05)	0.45*** (0.07)
Risk	-0.12* (0.00)	-0.12* (0.00)	-0.11* (0.00)	-0.10* (0.01)	-0.11* (0.00)	-0.10* (0.01)
Voting Capital	-0.56* (0.01)	-0.15 (0.91)	-0.62* (0.00)	1.62 (0.41)	-0.63* (0.00)	-0.74* (0.70)
Total Capital	0.72* (0.01)	0.16 (0.93)	0.43 (0.12)	3.01 (0.27)	0.36 (0.21)	2.24 (0.41)
Voting/Total Capital Ratio	-0.14** (0.04)	-0.08 (0.89)	-0.07 (0.42)	-0.38 (0.65)	-0.05 (0.60)	-0.15 (0.86)
(Voting Capital)^2		-0.33 (0.60)		-0.23 (0.80)		-0.24 (0.78)
(Total Capital)^2		0.47 (0.63)		1.39 (0.29)		1.07 (0.41)
(Voting/Total Capital Ratio)^2		-0.03 (0.74)		-0.00 (0.97)		-0.03 (0.85)
Dummy Foreigners		0.02 (0.68)		0.01 (0.92)		0.00 (0.93)
Dummy Government		0.06 (0.46)		0.03 (0.72)		0.03 (0.67)
Dummy Institutional		0.03 (0.71)		0.01 (0.91)		0.01 (0.88)
Adjusted R^2	0.20	0.18	0.20	0.19	0.21	0.20

*, ** and *** indicate statistically significant at 1%, 5% and 10%, respectively.

IV CONCLUSION

The debate on corporate governance in Brazil gained importance in the last decade, when the relationships between controlling and minority shareholders changed due to the privatizations and the entry of new investors in the economy, specially foreign and institutional investors. The purpose of this paper is to analyze the effects of the ownership and control structure on market valuation and dividend policy of Brazilian firms.

Results show a high degree of voting capital concentration. Even when there is no controlling shareholder, the largest shareholder owns a significative portion of the voting capital. The firm is controlled, on average, by its 3 largest shareholders. We can also note a significant difference between the voting and total capital owned by the largest shareholders. This mechanism seems to be used by majority shareholders to keep the firm's control without having to own 50% of the total capital.

Most firms are controlled by family groups, followed by foreign investors and, lessly, by institutional investors and the government. On average, shareholding agreements are present in 23% of the Brazilian firms. Most of the companies have a pyramidal structure, and it tends to be less used in government-owned firms and more frequent in family and foreign-owned firms. The issue of non-voting shares is common in Brazil, and voting shares represent, on average, 53% of the total capital. The percentage of voting shares on total capital is lower in firms controlled by families and institutional investors, while government-owned companies have the highest percentage of voting shares on total capital.

The results of the tests show that there is a relationship, which is statistically significant in many cases, between governance structure, market valuation, and dividend policy of Brazilian firms. The results are basically the same when we use the direct and indirect structures, but indirect structure variables tend to have a higher statistical power. A possible explanation is that indirect structure variables really measure who is the actual owner of the firm. Therefore, the study of ownership and control should focus not only on the direct structure, but also on who is the ultimate owner of the companies.

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